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January 25, 2000

Box PATENT APPLICATION  
Assistant Commissioner  
for Patents  
Washington, DC 20231

Express Mail Mailing Label No.: **EL195375794US**

Date of Deposit: **JANUARY 25, 2000**

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**JOHN J. ARNOTT (Reg. No. 39,095)**

Name of Applicant, Assignee, or Registered Representative

*John J. Arnott*  
Signature

**JANUARY 25, 2000**

Date of Signature

Re: U.S. Patent Application  
**UPHOLSTERY PAD AND METHOD**  
By: Wade J. WALTERSCHEID  
Our File No.: 12204/04701

Dear Sir:

Enclosed for filing are the following papers relating to an **UPHOLSTERY PAD AND METHOD**, Wade J. WALTERSCHEID, inventor:

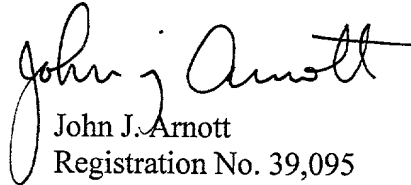
- Specification (19 pages);
- Executed Declaration and Power of Attorney (2 pages);
- Drawings (7 sheets);
- PrintEFS Patent Application Bibliographic Data (2 pages);
- Check in the amount of \$1,014.00 in payment of the filing fee;
- Assignment of the Application to PACCAR INC; and
- Check in the amount of \$40.00 for recordal of the Assignment.

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Page 2

Please file the Application and record the Assignment. Following the recordal, please return the Assignment to the undersigned attorney. Also, please indicate the assigned serial number on the enclosed postcard and return same to me.

If the checks are missing or the fee is insufficient for filing, please withdraw any additional funds needed from Sidley & Austin's Deposit Account No. 18-1260. Please refund any overpayment to Deposit Account No. 18-1260.

Respectfully submitted,

  
John J. Arnott  
Registration No. 39,095  
Attorney for Applicant

JJA/DCD/tjf

Enclosures

009270-40576460

Attorney Docket No.: 12204/04701

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re

U.S. Application: Wade J. WALTERSCHEID

For: UPHOLSTERY PAD AND METHOD

U.S. Serial No. Not yet assigned

Filed: Concurrently

Group Art Unit: To be determined

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JOHN J. ARNOTT (Reg. No. 39,095)

Name of Applicant, Assignee, or Registered Representative

Signature

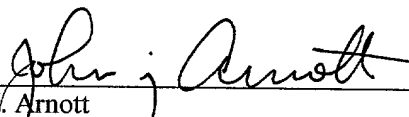
JANUARY 25, 2000

Date of Signature

**TRANSMITTAL OF PrintEFS  
PATENT APPLICATION BIBLIOGRAPHIC DATA**

Submitted herewith is bibliographic data (2 pages) for the above-identified application, in the PrintEFS Version 1.0.1 program format.

Respectfully submitted,

  
John J. Arnott  
Registration No. 39,095  
Attorney for Applicant

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## APPLICATION INFORMATION

Title Line One:: UPHOLSTERY PAD AND METHOD  
Total Drawing Sheets:: 7  
Formal Drawings?: Yes  
Application Type:: Utility  
Docket Number:: 12204/04701  
Secrecy Order in Parent Appl.?: No

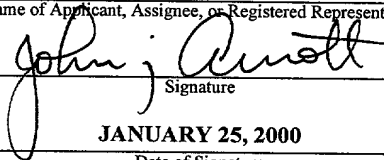
## REPRESENTATIVE INFORMATION

Registration Number One:: 39095  
Registration Number Two:: 27189  
Registration Number Three:: 37803  
Registration Number Four:: 38425  
Registration Number Five:: 29160  
Registration Number Six:: 30067  
Registration Number Seven:: 44196  
Registration Number Eight:: 44234  
Registration Number Nine:: 38595

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[illegible]

| General information |   |
|---------------------|---|
| Study               | 1997  |
| Country             | USA   |
| Study site          | University of California, Los Angeles   |
| Study design        | Case-control  |
| Study period        | 1990-1996   |
| Study population    | 1000 cases, 1000 controls   |
| Study objectives    | To determine the risk factors for the development of colorectal cancer  |
| Study results       | Increased risk of colorectal cancer associated with consumption of red meat, processed meat, and alcohol  |
| Study conclusions   | Consumption of red meat, processed meat, and alcohol is associated with an increased risk of colorectal cancer  |
| Study limitations   | Recall bias, selection bias, confounding  |
| Study strengths     | Large sample size, prospective design   |
| Study funding       | National Cancer Institute   |
| Study authors       | John H. Garber, et al.  |
| Study references    | 1. Garber JH, et al. (1997) Colorectal cancer and diet. <i>Journal of the National Cancer Institute</i> 89: 100-105   |
| Study keywords      | Colorectal cancer, diet, red meat, processed meat, alcohol  |
| Study abstract      | Background: Colorectal cancer is the second leading cause of cancer death in the United States. Diet is a major risk factor for the development of colorectal cancer. Objective: To determine the risk factors for the development of colorectal cancer. Design: Case-control study. Setting: University of California, Los Angeles. Participants: 1000 cases of colorectal cancer and 1000 controls. Results: Consumption of red meat, processed meat, and alcohol was associated with an increased risk of colorectal cancer. Conclusion: Consumption of red meat, processed meat, and alcohol is associated with an increased risk of colorectal cancer. |

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| <b>JOHN J. ARNOTT (Reg. No. 39,095)</b>   |
| Name of Applicant, Assignee, or Registered Representative   |
|   |
| Signature   |
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| Date of Signature   |

## UPHOLSTERY PAD AND METHOD

### FIELD OF THE INVENTION

5 This invention is directed generally to an upholstery pad for facing interior surfaces of a vehicle. In one aspect, this invention relates to an upholstery pad with features which allow a reduced number of fasteners for fastening the upholstery pad to a surface.

### BACKGROUND OF THE INVENTION

10 Interior walls of vehicles are typically faced with upholstery pads. These pads improve the aesthetic characteristics of the interior space of the vehicle as well as reduce the transmission of noise into the interior space of the vehicle. An upholstery pad is generally attached to an interior wall substructure of a vehicle by using mechanical push-type fasteners (e.g., "Christmas tree" fasteners). In order to fasten an upholstery pad in this way, some type of wall structure must be provided behind attachment areas of the upholstery pad into which fasteners can be installed.

15 Typically, a U-channel or other structure must be provided in all attachment areas for this purpose, which increases the complexity and cost of the vehicle assembly.

Further, the interior of a vehicle can be made more attractive by decreasing the number of exposed fasteners which attach upholstery pads to the vehicle cab substructure.

A need exists, therefore, for an improved upholstery pad for facing the interior walls of a vehicle that requires a reduced number of mechanical fasteners for installation and thus can decrease the requirement for substructure behind particular areas of the upholstery pad. A need also exists for an improved upholstery pad which requires a reduced number of mechanical fasteners for installation, thus improving the appearance of the vehicle interior.

## **BRIEF SUMMARY OF THE INVENTION**

The present invention is a new and advantageous upholstery pad for facing interior surfaces of a vehicle.

One object of the present invention is an upholstery pad for facing interior surfaces of a vehicle which requires a reduced number of mechanical fasteners for installation.

Another object of the present invention is an upholstery pad for facing interior surfaces of a vehicle which requires no mechanical fasteners for installation.

Yet another object of the present invention is a method for constructing an upholstery pad for facing interior surfaces of a vehicle which requires a reduced number of mechanical fasteners for installation.

These and other objects are attained by an upholstery pad comprising a panel having a front surface, a back surface, and a plurality of edges extending from the front surface to the back surface. The panel further has a fixed portion and a first flap, the first flap being divided from the fixed portion along a first hinging axis, the first

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5 flap being continuously pivotable about the first hinging axis between a first relaxed position and a first biased position. The upholstery pad further comprises a padding member having a front surface and a back surface, at least a portion of the back surface of the padding member being adhesively attached to the front surface of the panel, wherein the padding member extends across the first hinging axis. The upholstery pad also comprises a sheet having a front surface and a back surface, at least a portion of the back surface of the sheet being adhesively attached to the front surface of the padding member. Pivoting the first flap about the first hinging axis away from the first relaxed position and toward the first biased position causes a first force to be produced which urges the first flap to be pivoted about the first hinging axis toward the first relaxed position.

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15 When the upholstery pad is installed, the vehicle cab substructure is used to pivot the portion of the upholstery pad having the flap toward the biased position. Mechanical fasteners, if used, are inserted into attachment holes generated in the portion of the upholstery pad having the fixed portion of the panel and are engaged with the substructure. The mechanical fasteners hold the fixed portion, and thus that portion of the upholstery pad, in place. The force applied to the substructure by the flap, in combination with friction between the sheet and the substructure, holds the end of the upholstery pad having the flap in place without the use of other fastening means.

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An upholstery pad of the present invention may have a plurality of flaps and may or may not use mechanical fasteners to fasten the portion of the upholstery pad having the fixed portion of the panel to the substructure.

**BRIEF DESCRIPTION OF THE DRAWINGS**

Other advantages and features of the invention will become more apparent with reference to the following detailed description of the invention in connection with the accompanying drawings, wherein like reference numerals have been applied to like elements, in which:

FIG. 1 is an exploded perspective view of a first embodiment of the present invention;

FIG. 2 is a rear view of the first embodiment of the present invention showing a relaxed flap position;

FIG. 3 is a cross-sectional view of the first embodiment of the present invention taken along the III-III line in FIG. 2;

FIG. 4 is a cross-sectional view of the first embodiment of the present invention taken along the IV-IV line in FIG. 2;

FIG. 5 is a rear view of the first embodiment of the present invention showing a biased flap position;

FIG. 6 is a cross-sectional view of the first embodiment of the present invention taken along the VI-VI line in FIG. 5;

FIG. 7 is a cross-sectional view of the first embodiment of the present invention taken along the VII-VII line in FIG. 5;

FIG. 8 is an exploded perspective view of a second embodiment of the present invention;

FIG. 9 is a rear view of the second embodiment of the present invention showing relaxed flap positions;

FIG. 12 is a rear view of the second embodiment of the present invention showing biased flap positions;

FIG. 14 is a cross-sectional view of the second embodiment of the present invention taken along the XIV-XIV line in FIG. 12; and

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## DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings, and FIG. 1 in particular, shown therein are components of an upholstery pad 100 of the present invention. The upholstery pad 100 comprises a panel 102, which provides support for the upholstery pad 100; one or more padding members 104; a sheet 106 of vinyl, fabric, or other upholstery-type covering material; and one or more adhesive materials to secure the components together. The panel 102 has a fixed portion 108 and a flap 110 which are divided along a hinging axis 112. The panel 102 is perforated, scored, or separated along a path which is parallel to a hinging axis 112 so that the flap 110 is continuously pivotable about the hinging axis 112.

Referring now to FIGS. 2-4, shown therein is the assembled upholstery pad 100 of FIG. 1. The padding members 104 extend between and are adhesively attached to the panel 102 and the sheet 106. The sheet 106 is tensioned across the padding members 104, which locally compresses the padding members 104 and thus causes the corner areas 126 to become rounded. The sheet 106, which is adhesively attached to areas on the front surface of the panel 102 that are not covered by the padding members 104, extends around the edges of the panel 102 and is attached to the back surface 124 (see FIG. 1) of the panel 102. Attachment holes 128 are provided in the upholstery pad 100 so that mechanical fasteners can be inserted therein to attach the fixed portion 108 to a substructure.

The upholstery pad 100 is shown in FIGS. 2-4 in a relaxed configuration, as the flap 110 has no forces external to the upholstery pad 100 acting on it. In this configuration, the flap 110 is substantially coplanar with the fixed portion 108. In FIGS. 5-7, the upholstery pad 100 is shown in a biased configuration, as the flap 110 is pivoted about the hinging axis 112 to a biased position and is not substantially coplanar with the fixed portion 108. As the flap 110 is pivoted about the hinging axis 112, the padding members 104 which extend across the hinging axis 112 become

compressed, thus acting as springs which urge the flap 110 to be pivoted about the hinging axis 112 back toward the relaxed configuration shown in FIGS. 2-4. When the upholstery pad 100 is installed as shown in FIGS. 6 and 7, mechanical fasteners 130 are inserted into each of the holes 128 and are engaged with the substructure 132. The mechanical fasteners 130 hold the fixed portion 108, and thus that portion of the upholstery pad 100, in place. The force applied to the substructure 132 by the flap 110, in combination with friction between the sheet 106 and the substructure 132, holds the end of the upholstery pad 100 having the flap 110 in place without the use of other fastening means.

Referring now to FIG. 8, a second embodiment of the present invention is shown comprising a panel 202, one or more padding members 204, and a sheet 206. The panel 202 is divided into a fixed portion 208, a first flap 210, and a second flap 212. The first flap 210 is separated from the fixed portion 208 by a first hinging axis 214, and the second flap is separated from the fixed portion 208 by a second hinging axis 216. As in the first embodiment (FIG. 1), the padding members 204 are adhesively attached to the front surface 218 of the panel 202 and, in this embodiment, at least one of the padding members extends across the first hinging axis 214 and at least one of the padding members extends across the second hinging axis 216. In other respects, the second embodiment, as shown in FIG. 8, is the same as the first embodiment, as shown in FIG. 1.

Calling attention now to FIGS. 9-11, shown therein is the assembled upholstery pad 200 of FIG. 8. As in the first embodiment, the padding members 204 extend between and are adhesively attached to the panel 202 and the sheet 206. The sheet 206 is stretched across the padding members 204, which locally compresses the padding members 204 and which causes the corner areas 220 to become rounded. The sheet 206, which is adhesively attached to areas on the front surface 218 of the panel 202 that are not covered by the padding members 204, extends around the edges of the panel 202 and is attached to the back surface 222 of the panel 202. An

attachment hole 224 is provided in upholstery pad 200 so that a mechanical fastener can be inserted therein to attach the fixed portion 208 to a substructure 228. This embodiment of the present invention does not require that the fixed portion 208 be mechanically fastened to a substructure 228, but the fixed portion 208 may be mechanically fastened to a substructure 228 at one or more points as desired.

The upholstery pad 200 is shown in FIGS. 10 and 11 in a relaxed configuration, as the flaps 210 and 212 have no forces external to the upholstery pad 200 acting on them. In this configuration, the flaps 210 and 212 are substantially coplanar with the fixed portion 208. In FIGS. 12-14, the upholstery pad 200 is shown in a biased configuration, as the flaps 210 and 212 are pivoted about the first hinging axis 214 and the second hinging axis 216 to biased positions and are not substantially coplanar with the fixed portion 208. As the flaps 210 and 212 are pivoted about the hinging axes 214 and 216, respectively, the padding members 204 which extend across the hinging axes 212 and 214 become compressed, thus acting as springs which urge the flaps 210 and 212 to be pivoted about the hinging axes 214 and 216, respectively, back toward the relaxed configuration shown in FIGS. 10 and 11. When the upholstery pad 200 is installed as shown in FIGS. 13 and 14, a mechanical fastener 226 is inserted into the hole 224 and is engaged with the substructure 228. In this example, the mechanical fastener 226 holds the fixed portion 208, and thus that portion of the upholstery pad 200, in place; however, no attachment hole 224 or mechanical fastener 226 is required in this embodiment of the present invention. The force applied to the substructure 228 by the flaps 210 and 212, in combination with friction between the sheet 206 and the substructure 228, holds the ends of the upholstery pad 200 having the flaps 210 and 212 in place without the use of other fastening means.

In these embodiments, the panels 102 and 202 are typically made of solid cardboard having a thickness of about 2 mm (0.08 in) but can be made of other materials and have other thicknesses. The padding members 104 and 204 are

typically made of open-celled foam having thicknesses from about 9-38 mm (3/8-1 1/2 in); however, padding members 104 and 204 made of other materials and thicknesses can also be used. The sheets 106 and 206 of the embodiments disclosed herein are made of vinyl, fabric, or any other suitable upholstery material.

5           Various embodiments of the methods of construction of the present invention are described herein with reference to the first upholstery pad embodiment shown in FIGS. 1-7; however, the second upholstery pad embodiment, shown in FIGS. 8-14, can also be constructed according to the methods of construction disclosed herein.

10           Referring now to FIGS. 1-7 and 15, a first method of constructing an upholstery panel according to the present invention comprises providing a panel 102, one or more padding members 104, and a sheet 106. A hinge is created along a hinging axis 112 to divide a flap 110 from a fixed portion 108 of the panel 102 so that the flap 110 is continuously pivotable about the hinging axis 112 between a relaxed position and a biased position. The hinge can be created by perforating or scribing the panel 102 along a path parallel to the hinging axis 112 or by separating the flap 110 from the fixed portion 108 along a path parallel to the hinging axis 112. The padding members 104 are immersed into a bath of adhesive resin, to saturate the padding members 104 with adhesive resin, and the excess resin is removed from the padding members 104. The padding members 104 are placed onto a predetermined location on the front surface 116 of the panel 102 so that at least one of the padding members 104 extends across the hinging axis 112 and so that at least a portion of the back surface 114 of the padding members 104 is in contact with the front surface 116 of the panel 102. The sheet 106 is draped over the front surface 120 of the padding members 104 and the front surface 116 of the panel 102 to produce an upholstery pad assembly 300, wherein at least a portion of the back surface 118 of the sheet 106 is in contact with the front surface 120 of at least one of the padding members 104. The upholstery pad assembly 300 is placed onto a first heatable platen 302 of a press having at least the first heatable platen 302 and a second heatable platen 304. The

heatable platens 302 and 304 are mated so as to capture the upholstery pad assembly 300 between the platens 302 and 304. The upholstery pad assembly 300 is held between the platens 302 and 304 for a predetermined period of time and at a predetermined temperature or temperatures to create a bonded upholstery pad assembly. The first heatable platen 302 is separated from the second heatable platen 304 and the bonded upholstery pad assembly is removed therefrom. The sheet 106 can also be attached to the edges 122 of the panel 102 and can be attached to the back surface 124 of the panel 102. Excess of the sheet 106 can be trimmed after removal from the heatable platens 302 and 304. If attachment holes 128 are desirable, they are generated by drilling, punching, piercing, or other hole-generating processes.

If the upholstery pad has a plurality of flaps, a plurality of hinges are created corresponding to each of the plurality of flaps.

A second method of constructing an upholstery panel according to the present invention comprises adhesively attaching the components as described in the first method by using any adhesive attachment process suitable and without the use of heatable platens.

Although the present invention has been described with referenced to a presently preferred embodiment, it will be appreciated by those skilled in the art that various modifications, alternatives, variations, etc., may be made without departing from the spirit and scope of the invention as defined in the appended claims.

**WHAT IS CLAIMED IS:**

1. An upholstery pad, comprising:

a panel having a front surface, a back surface, and a plurality of edges extending from said front surface to said back surface, said panel further having a fixed portion and a first flap, said first flap being divided from said fixed portion along a first hinging axis, said first flap being continuously pivotable about said first hinging axis between a first relaxed position and a first biased position;

a padding member having a front surface and a back surface, at least a portion of said back surface of said padding member being adhesively attached to said front surface of said panel, wherein said padding member extends across said first hinging axis; and

a sheet having a front surface and a back surface, at least a portion of said back surface of said sheet being adhesively attached to said front surface of said padding member,

wherein pivoting said first flap about said first hinging axis away from said first relaxed position and toward said first biased position causes a first force to be produced which urges said first flap to be pivoted about said first hinging axis toward said first relaxed position.

2. An upholstery pad, according to claim 1, wherein said first force is at least partially caused by said padding member being placed in tension when said first flap is pivoted about said first hinging axis away from said first relaxed position and toward said first biased position.

3. An upholstery pad, according to claim 1, wherein said fixed portion is mechanically fastened to a substructure.

4. An upholstery pad, according to claim 3, wherein said sheet extends across and is adhesively attached to at least one of said edges of said panel and extends onto and is adhesively attached to said back surface of said panel.

5. An upholstery pad, according to claim 3, wherein said panel is perforated along a path parallel to said first hinging axis.

6. An upholstery pad, according to claim 3, wherein said first flap is detached from said fixed portion along a path parallel to said first hinging axis.

7. An upholstery pad, according to claim 3, wherein said front surface of said panel is scored along a path parallel to said first hinging axis.

8. An upholstery pad, according to claim 3, said fixed portion of said panel is fastened to said substructure by at least one push-type panel fastener.

9. An upholstery pad, according to claim 1, said panel having a second flap, said second flap being continuously pivotable, with respect to said fixed portion, along a second hinging axis between a second relaxed position and a second biased position,

5 wherein a portion of said padding member extends across at least a portion of said second hinging axis; and

wherein pivoting said second flap about said second hinging axis from said second relaxed position toward said second biased position causes a second force to be produced which urges said second flap to be pivoted about said second hinging axis toward said second relaxed position.

10 10. An upholstery pad, according to claim 9, wherein said second force is at least partially caused by said padding member being placed in tension when said second flap is pivoted about said second hinging axis away from said second relaxed position and toward said second biased position.

11. An upholstery pad, according to claim 9, wherein said sheet extends across and is adhesively attached to at least one of said edges of said panel and extends onto and is adhesively attached to said back surface of said panel.

12. An upholstery pad, according to claim 9, wherein said panel is perforated along a path parallel to said second hinging axis.

13. An upholstery pad, according to claim 9, wherein said second flap is detached from said fixed portion along a path parallel to said second hinging axis.

14. An upholstery pad, according to claim 9, wherein said front surface of said panel is scored along a path parallel to said second hinging axis.

15. An upholstery pad, according to claim 9, wherein said fixed portion is mechanically fastened to a substructure.

16. An upholstery pad, according to claim 15, said fixed portion of said panel is fastened to said substructure by at least one push-type panel fastener.

17. A method of constructing an upholstery pad having a first flap which, when said first flap is pivoted about a first hinging axis from a first relaxed position toward a first biased position, is urged to be pivoted about said first hinging axis toward said first relaxed position, said method comprising the steps of:

5 providing a panel having a front surface, a back surface, and a plurality of edges extending from said front surface to said back surface;

creating a first hinge along a first hinging axis in said panel to divide a first flap of said panel from a fixed portion of said panel, wherein said first flap is continuously pivotable about said first hinging axis between a first relaxed position and a first biased position;

10 providing a padding member having a front surface and a back surface;

immersing said padding member into a bath of adhesive resin to saturate said padding member with said adhesive resin;

extracting excess resin from said padding member;

15 placing said padding member, which has been immersed into said bath of adhesive resin and from which said excess resin has been extracted, onto a predetermined location on said front surface of said panel so that said padding member extends across said first hinging axis and so that at least a portion of said back surface of said padding member is in contact with said front surface of said  
20 panel;

providing a sheet having a front surface and a back surface;

draping said sheet over said front surface of said padding member and said front surface of said panel to produce an upholstery pad assembly, wherein at least a portion of said back surface of said sheet is in contact with said front surface of said  
25 padding member;

placing said upholstery pad assembly onto a first heatable platen of a press having said first heatable platen and a second heatable platen;

mating said first heatable platen and said second heatable platen so as to capture said upholstery pad assembly between said first heatable platen and said  
30 second heatable platen for a predetermined period of time and at a predetermined temperature to create a bonded upholstery pad assembly;

separating said first heatable platen from said second heatable platen; and removing said bonded upholstery pad assembly from said first heatable platen.

18. A method of constructing an upholstery pad, according to claim 17, further comprising the steps of:

attaching said sheet to at least one of said plurality of edges of said panel; and attaching said sheet to said back surface of said panel.

19. A method of constructing an upholstery pad, according to claim 17, further comprising the step of trimming excess of said sheet from said bonded upholstery pad assembly.

20. A method of constructing an upholstery pad, according to claim 17, further comprising the step of generating at least one attachment hole in said fixed portion of said panel which is capable of receiving a mechanical fastener for attaching said fixed portion of said panel to a substructure.

21. A method of constructing an upholstery pad, according to claim 17, wherein said step of creating a first hinge comprises perforating said panel along a path parallel to said first hinging axis.

22. A method of constructing an upholstery pad, according to claim 17, wherein said step of creating a first hinge comprises detaching said first flap from said fixed portion along a path parallel to said first hinging axis.

23. A method of constructing an upholstery pad, according to claim 17, wherein said step of creating a first hinge comprises scoring said front surface of said panel along a path parallel to said first hinging axis.

24. A method of constructing an upholstery pad, according to claim 17, said panel further having a second flap which, when said second flap is pivoted about a second hinging axis from a second relaxed position toward a second biased position, is urged to be pivoted about said second hinging axis toward said second relaxed position, said method further comprising the step of creating a second hinge along a second hinging axis in said panel to divide said second flap of said panel from said fixed portion of said panel,

wherein said second flap is continuously pivotable about said second hinging axis between a second relaxed position and a second biased position; and

wherein said padding member extends across said second hinging axis.

25. A method of constructing an upholstery pad, according to claim 24, wherein said step of creating a second hinge comprises perforating said panel along a path parallel to said second hinging axis.

26. A method of constructing an upholstery pad, according to claim 24, wherein said step of creating a second hinge comprises detaching said second flap from said fixed portion along a path parallel to said second hinging axis.

27. A method of constructing an upholstery pad, according to claim 24, wherein said step of creating a second hinge comprises scoring said front surface of said panel along a path parallel to said second hinging axis.

28. A method of constructing an upholstery pad, according to claim 24, further comprising the step of generating at least one attachment hole in said fixed portion of said panel which is capable of receiving a mechanical fastener for attaching said fixed portion of said panel to a substructure.

29. A method of constructing an upholstery pad having a first flap which, when said first flap is pivoted about a first hinging axis from a first relaxed position toward a first biased position, is urged to be pivoted about said first hinging axis toward said first relaxed position, said method comprising the steps of:

5 providing a panel having a front surface, a back surface, and a plurality of edges extending from said front surface to said back surface;

creating a first hinge along a first hinging axis in said panel to divide a first flap of said panel from a fixed portion of said panel, wherein said first flap is continuously pivotable about said first hinging axis between a first relaxed position and a first biased position;

10 providing a padding member having a front surface, a back surface, and a thickness;

placing said padding member onto a predetermined location on said front surface of said panel so that said padding member extends across said first hinging

15 axis and so that at least a portion of said back surface of said padding member is in  
contact with said front surface of said panel;

attaching said padding member to said panel with an adhesive;

providing a sheet having a front surface and a back surface;

20 placing said sheet onto a predetermined location on said front surface of said  
padding member so that at least a portion of said back surface of said sheet is in  
contact with said front surface of said padding member; and

attaching said sheet to at least a portion of said panel with an adhesive.

30. A method of constructing an upholstery pad, according to claim 29,  
further comprising the step of generating at least one attachment hole in said fixed  
portion of said panel which is capable of receiving a mechanical fastener for attaching  
said fixed portion of said panel to a substructure.

31. A method of constructing an upholstery pad, according to claim 29,  
wherein said step of creating a first hinge comprises perforating said panel along a  
path parallel to said first hinging axis.

32. A method of constructing an upholstery pad, according to claim 29,  
wherein said step of creating a first hinge comprises detaching said first flap from said  
fixed portion along a path parallel to said first hinging axis.

33. A method of constructing an upholstery pad, according to claim 29,  
wherein said step of creating a first hinge comprises scoring said front surface of said  
panel along a path parallel to said first hinging axis.

34. A method of constructing an upholstery pad, according to claim 29,  
said panel further having a second flap which, when said second flap is pivoted about  
a second hinging axis from a second relaxed position toward a second biased position,  
is urged to be pivoted about said second hinging axis toward said second relaxed  
5 position, said method further comprising the step of creating a second hinge along a

second hinging axis in said panel to divide said second flap of said panel from said fixed portion of said panel,

wherein said second flap is continuously pivotable about said second hinging axis between a second relaxed position and a second biased position; and

10 wherein said padding member extends across said second hinging axis.

35. A method of constructing an upholstery pad, according to claim 34, wherein said step of creating a second hinge comprises perforating said panel along a path parallel to said second hinging axis.

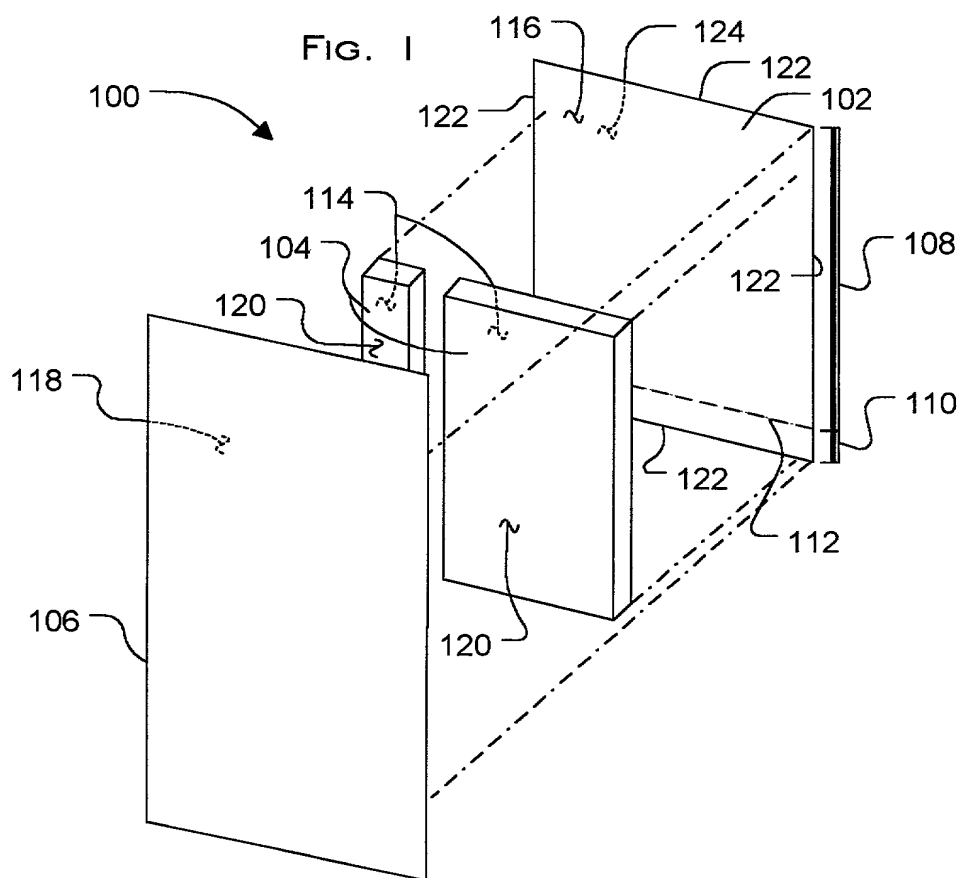
36. A method of constructing an upholstery pad, according to claim 34, wherein said step of creating a second hinge comprises detaching said second flap from said fixed portion along a path parallel to said second hinging axis.

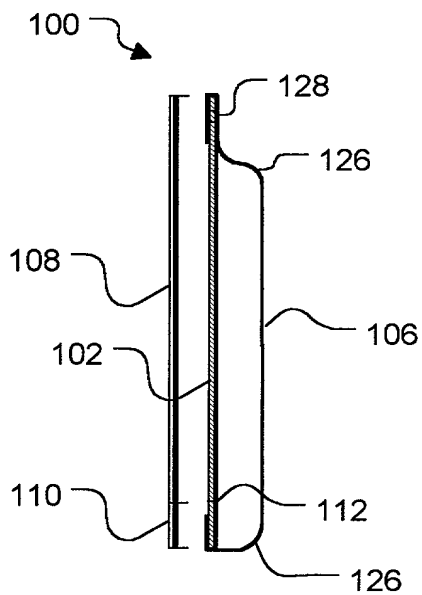
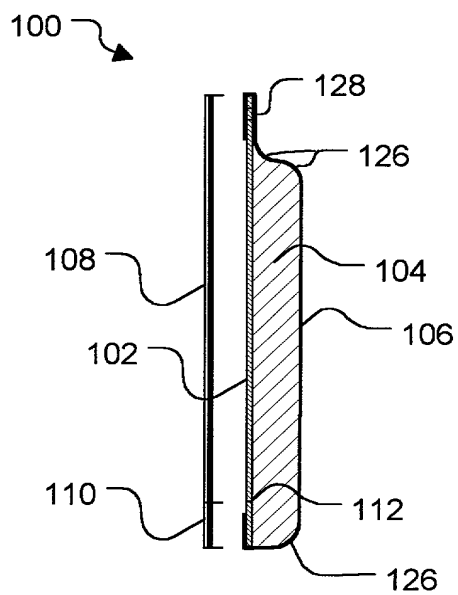
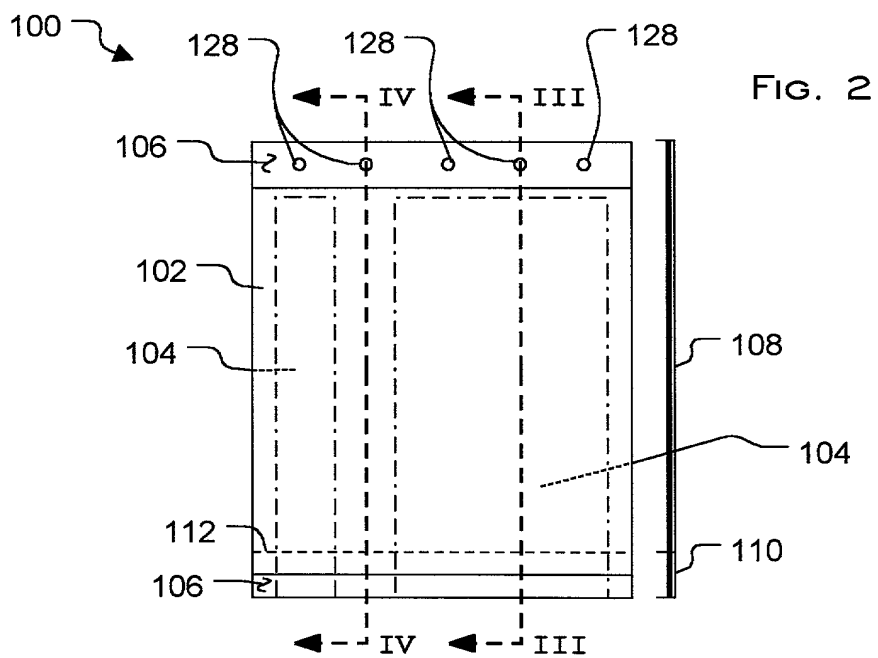
37. A method of constructing an upholstery pad, according to claim 34, wherein said step of creating a second hinge comprises scoring said front surface of said panel along a path parallel to said second hinging axis.

38. A method of constructing an upholstery pad, according to claim 34, further comprising the step of generating at least one attachment hole in said fixed portion of said panel which is capable of receiving a mechanical fastener for attaching said fixed portion of said panel to a substructure.

**ABSTRACT OF THE DISCLOSURE**

An upholstery pad has a panel with a hinging axis that divides a fixed portion of the panel from a flap of the panel. The flap is continuously pivotable about the hinging axis between a relaxed position and a biased position. The panel assembled  
5 into the upholstery pad along with one or more padding members and a sheet of an upholstery-type material, a force is created within the upholstery pad which urges the flap to pivot toward the relaxed position when the flap is pivoted toward the biased position. This force, in combination with friction between the sheet and a  
10 substructure, retains the upholstery pad in place with minimal other mechanical fastening, if any.





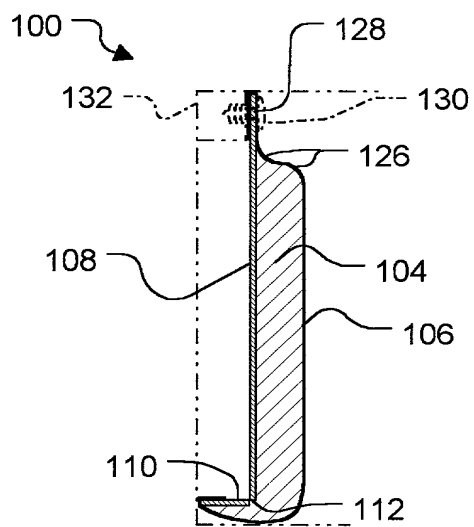
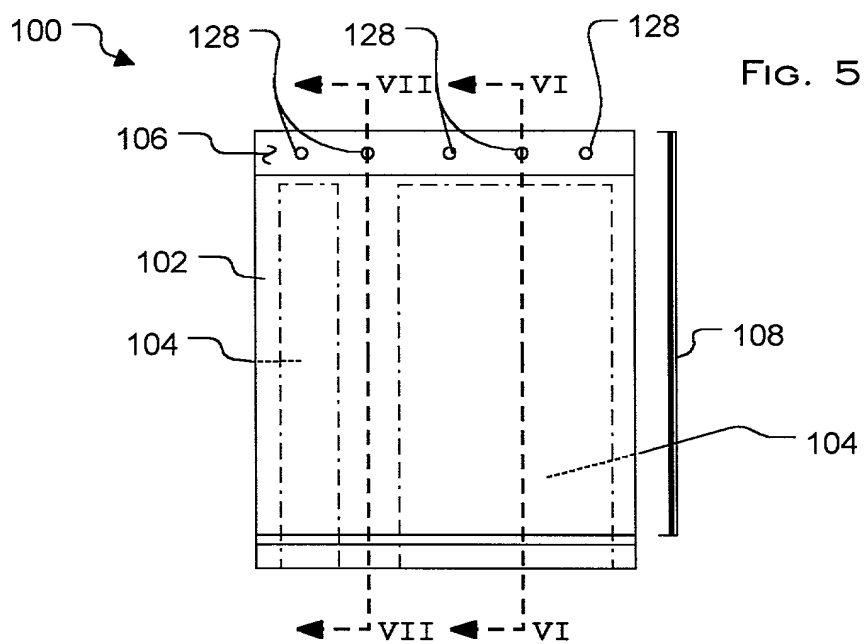


FIG. 6

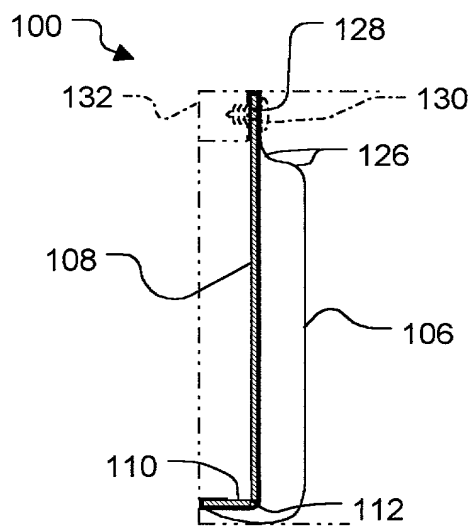
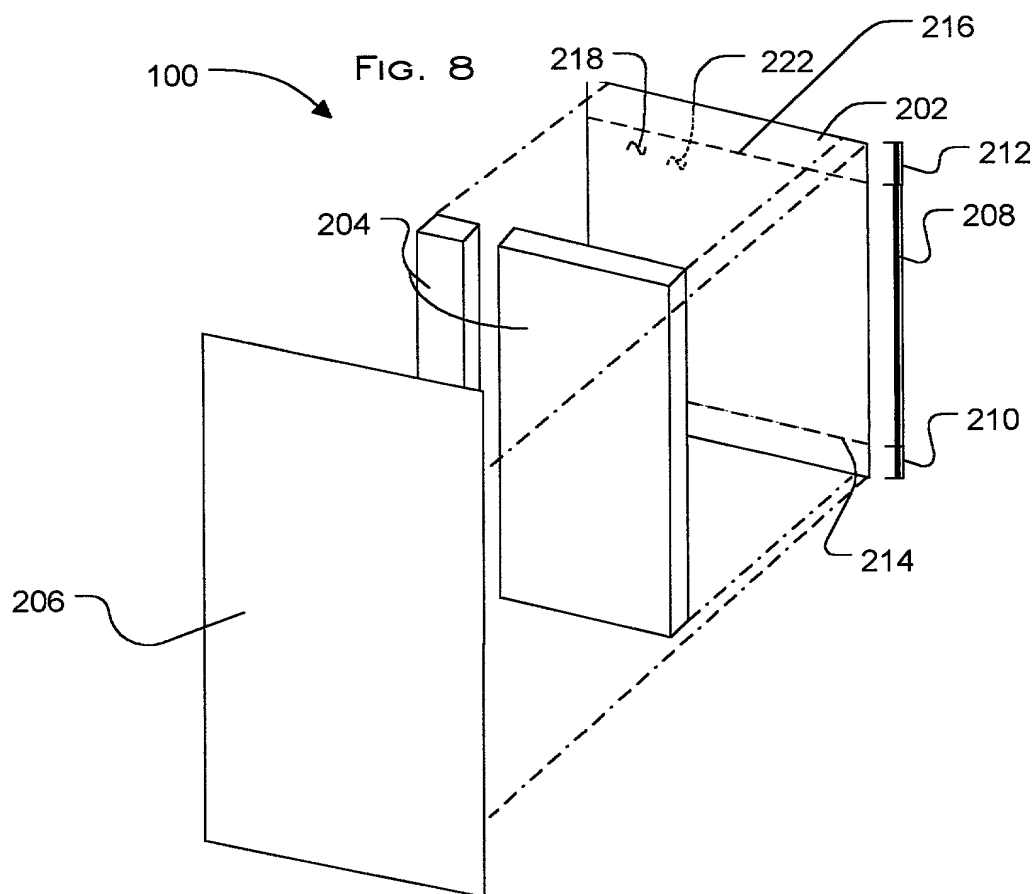


FIG. 7



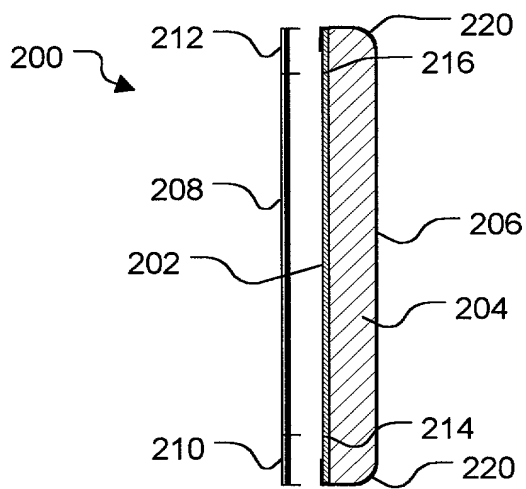
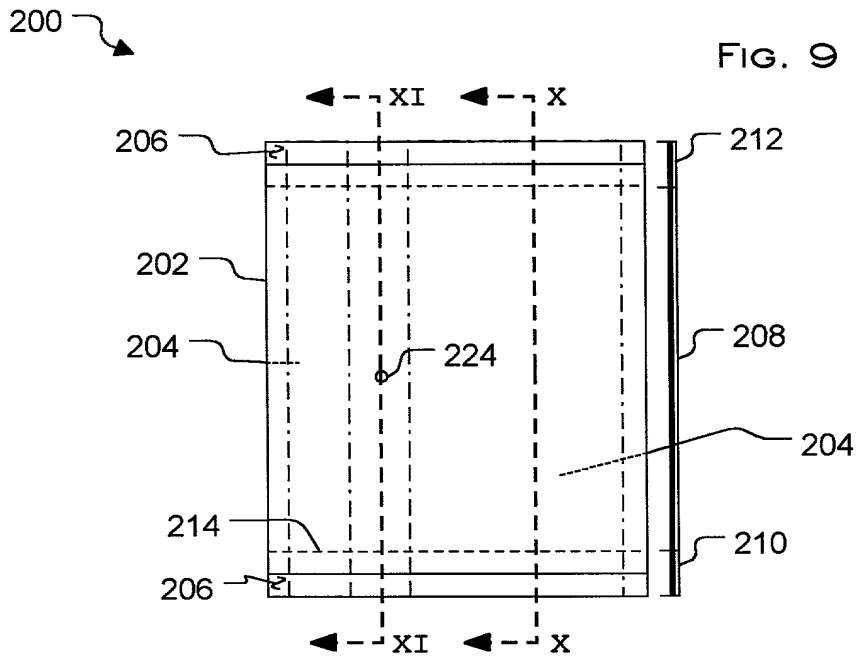


FIG. 10

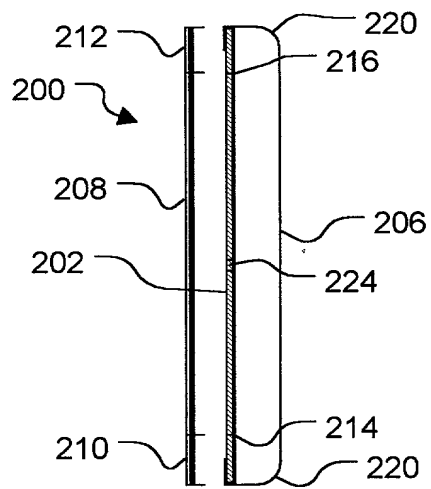


FIG. 11

FIG. 12

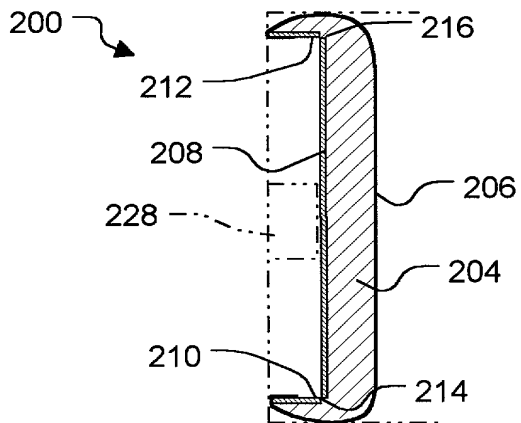
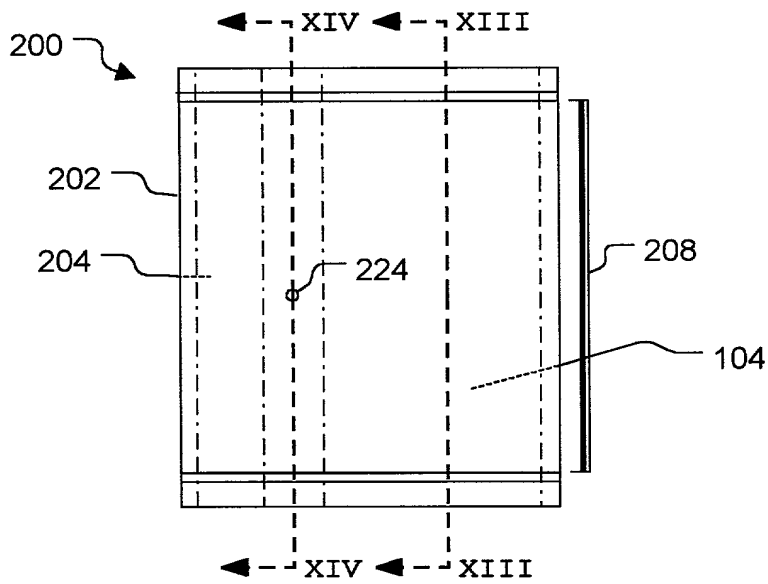


FIG. 13

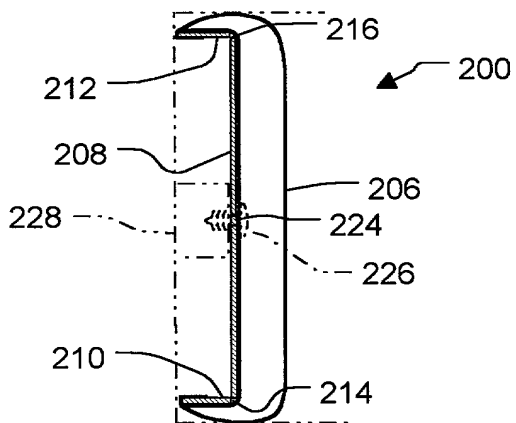


FIG. 14

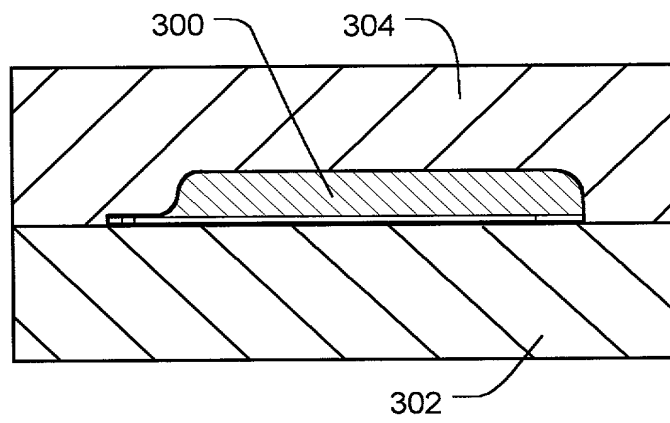


FIG. 15

# **DECLARATION AND POWER OF ATTORNEY**

As the below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name;

I believe that I am the original, first, and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention, design or discovery entitled

## **UPHOLSTERY PAD AND METHOD**

the specification of which is attached hereto;

I have reviewed and understand the contents of the above-identified specification, including the claims; and

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me which is material to patentability as defined in 37 C.F.R. § 1.56.

I hereby appoint:

|                      |                 |
|----------------------|-----------------|
| John J. Arnott       | Reg. No. 39,095 |
| Charles S. Cotropia  | Reg. No. 27,189 |
| Kathi A. Cover       | Reg. No. 37,803 |
| Daren C. Davis       | Reg. No. 38,425 |
| William R. Gustavson | Reg. No. 29,160 |
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| William D. McSpadden | Reg. No. 44,234 |
| Steven P. Rhines     | Reg. No. 38,595 |
| Thomas N. Tarnay     | Reg. No. 41,341 |
| James W. Williams    | Reg. No. 20,047 |

all of the firm of Sidley & Austin, my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, and to file and prosecute any international patent applications filed thereon before any international authorities under the Patent Cooperation Treaty.

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John J. Arnott  
(214) 981-3300  
Atty. Docket No. **12204/04701**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of sole inventor: **Wade J. Walterscheid**

Inventor's signature: *Wade J. Walterscheid*

Date: 1, 24, 2000

Residence (City, County, State): **Rosston, Cooke County, Texas**

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